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Sequence Listing was accepted.

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Reviewer: Durreshwar Anjum

Timestamp: [year=2011; month=1; day=10; hr=14; min=45; sec=3; ms=43; ]

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Application No: 10697720 Version No: 3.0

Input Set:

Output Set:

Started: 2011-01-10 10:47:08.132  
Finished: 2011-01-10 10:47:10.107  
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 975 ms  
Total Warnings: 21  
Total Errors: 0  
No. of SeqIDs Defined: 21  
Actual SeqID Count: 21

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

**Input Set:**

**Output Set:**

**Started:** 2011-01-10 10:47:08.132  
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**Total Warnings:** 21  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 21  
**Actual SeqID Count:** 21

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

W 402

Undefined organism found in <213> in SEQ ID (21)

# SEQUENCE LISTING

<110> Cohen, Stanley N.  
Li, Limin

<120> MAMMALIAN TUMOR SUSCEPTIBILITY GENES AND  
THEIR USES

<130> FUNC-0027-CO5

<140> 10697720

<141> 2003-10-29

<150> US 09/804,690

<151> 2001-03-12

<150> US 09/146,187

<151> 1998-09-01

<150> US 08/977,818

<151> 1997-11-25

<150> US 08/670,274

<151> 1996-06-13

<150> US 08/585,758

<151> 1996-01-16

<150> US 60/006,856

<151> 1995-11-16

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 1448

<212> DNA

<213> Artificial Sequence

<220>

<223> TSG101 nucleotide

<221> CDS

<222> (61)...(1203)

<400> 1

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atg atg tcc aag tac aaa tat aga gat cta acc gtc cgt caa act gtc 108  
Met Met Ser Lys Tyr Lys Tyr Arg Asp Leu Thr Val Arg Gln Thr Val  
1 5 10 15

aat gtc atc gct atg tac aaa gat ctc aaa cct gta ttg gat tca tat 156  
Asn Val Ile Ala Met Tyr Lys Asp Leu Lys Pro Val Leu Asp Ser Tyr  
20 25 30

gtt ttt aat gat ggc agt tcc agg gag ctg gtg aac ctc act ggt aca	204
Val Phe Asn Asp Gly Ser Ser Arg Glu Leu Val Asn Leu Thr Gly Thr	
35 40 45	
atc cca gtg cgt tat cga ggt aat ata tat aat att cca ata tgc ctg	252
Ile Pro Val Arg Tyr Arg Gly Asn Ile Tyr Asn Ile Pro Ile Cys Leu	
50 55 60	
tgg ctg ctg gac aca tac cca tat aac ccc cct atc tgt ttt gtt aag	300
Trp Leu Leu Asp Thr Tyr Pro Tyr Asn Pro Pro Ile Cys Phe Val Lys	
65 70 75 80	
cct act agt tca atg act att aaa aca gga aag cat gtg gat gca aat	348
Pro Thr Ser Ser Met Thr Ile Lys Thr Gly Lys His Val Asp Ala Asn	
85 90 95	
ggg aaa atc tac cta cct tat cta cat gac tgg aaa cat cca cgg tca	396
Gly Lys Ile Tyr Leu Pro Tyr Leu His Asp Trp Lys His Pro Arg Ser	
100 105 110	
gag ttg ctg gag ctt att caa atc atg att gtg ata ttt gga gag gag	444
Glu Leu Leu Glu Leu Ile Gln Ile Met Ile Val Ile Phe Gly Glu Glu	
115 120 125	
cct cca gtg ttc tcc cgg cct act gtt tct gca tcc tac cca cca tac	492
Pro Pro Val Phe Ser Arg Pro Thr Val Ser Ala Ser Tyr Pro Pro Tyr	
130 135 140	
aca gca aca ggg cca cca aat acc tcc tac atg cca ggc atg cca agt	540
Thr Ala Thr Gly Pro Pro Asn Thr Ser Tyr Met Pro Gly Met Pro Ser	
145 150 155 160	
gga atc tct gca tat cca tct gga tac cct ccc aac ccc agt ggt tat	588
Gly Ile Ser Ala Tyr Pro Ser Gly Tyr Pro Pro Asn Pro Ser Gly Tyr	
165 170 175	
cct ggc tgt cct tac cca cct gct ggc cca tac cct gcc aca aca agc	636
Pro Gly Cys Pro Tyr Pro Pro Ala Gly Pro Tyr Pro Ala Thr Thr Ser	
180 185 190	
tca cag tac cct tcc cag cct cct gtg acc act gtt ggt ccc agc aga	684
Ser Gln Tyr Pro Ser Gln Pro Pro Val Thr Thr Val Gly Pro Ser Arg	
195 200 205	
gat ggc aca atc agt gag gac act atc cgt gca tct ctc atc tca gca	732
Asp Gly Thr Ile Ser Glu Asp Thr Ile Arg Ala Ser Leu Ile Ser Ala	
210 215 220	
gtc agt gac aaa ctg aga tgg cgg atg aag gag gaa atg gat ggt gcc	780
Val Ser Asp Lys Leu Arg Trp Arg Met Lys Glu Glu Met Asp Gly Ala	
225 230 235 240	
cag gca gag ctt aat gcc ttg aaa cga aca gag gaa gat ctg aaa aaa	828
Gln Ala Glu Leu Asn Ala Leu Lys Arg Thr Glu Glu Asp Leu Lys Lys	
245 250 255	

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ggc cac cag aaa ctg gaa gag atg gtc acc cgc tta gat caa gaa gta      876
Gly His Gln Lys Leu Glu Glu Met Val Thr Arg Leu Asp Gln Glu Val
      260                      265                      270

gct gaa gtt gat aaa aac ata gaa ctt ttg aaa aag aag gat gaa gaa      924
Ala Glu Val Asp Lys Asn Ile Glu Leu Leu Lys Lys Lys Asp Glu Glu
      275                      280                      285

cta agt tct gct ctg gag aaa atg gaa aat caa tct gaa aat aat gat      972
Leu Ser Ser Ala Leu Glu Lys Met Glu Asn Gln Ser Glu Asn Asn Asp
      290                      295                      300

att gat gaa gtt atc att ccc aca gcc cca ctg tat aaa cag att cta      1020
Ile Asp Glu Val Ile Ile Pro Thr Ala Pro Leu Tyr Lys Gln Ile Leu
      305                      310                      315                      320

aat ctg tat gca gag gaa aat gct att gaa gac act atc ttt tac ctt      1068
Asn Leu Tyr Ala Glu Glu Asn Ala Ile Glu Asp Thr Ile Phe Tyr Leu
      325                      330                      335

gga gaa gct ttg cgg cgg gga gtc ata gac ctg gat gtg ttc ctg aaa      1116
Gly Glu Ala Leu Arg Arg Gly Val Ile Asp Leu Asp Val Phe Leu Lys
      340                      345                      350

cac gtc cgc ctc ctg tcc cgt aaa cag ttc cag cta agg gca cta atg      1164
His Val Arg Leu Leu Ser Arg Lys Gln Phe Gln Leu Arg Ala Leu Met
      355                      360                      365

caa aag gca agg aag act gcg ggc ctt agt gac ctc tac tgacatgtgc      1213
Gln Lys Ala Arg Lys Thr Ala Gly Leu Ser Asp Leu Tyr
      370                      375                      380

tgtcagctgg agaccgacct ctccgtaaag cattcttttc ttcttctttt tctcatcagt 1273
agaaccacaca ataagttatt gcagtttatac attcaagtgt taaatatattt gaatcaataa 1333
tatatatttct gtttcctttg ggtaaaaact ggcttttatt aatgcacttt ctaccctctg 1393
taagecgtctg tgctgtgctg ggactgactg ggctaaataa aatttggtgc ataaa      1448

<210> 2
<211> 381
<212> PRT
<213> Artificial Sequence

<220>
<223> TSG101 nucleotide

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Met Met Ser Lys Tyr Lys Tyr Arg Asp Leu Thr Val Arg Gln Thr Val
  1                      5                      10                      15
Asn Val Ile Ala Met Tyr Lys Asp Leu Lys Pro Val Leu Asp Ser Tyr
      20                      25                      30
Val Phe Asn Asp Gly Ser Ser Arg Glu Leu Val Asn Leu Thr Gly Thr
      35                      40                      45
Ile Pro Val Arg Tyr Arg Gly Asn Ile Tyr Asn Ile Pro Ile Cys Leu
      50                      55                      60
Trp Leu Leu Asp Thr Tyr Pro Tyr Asn Pro Pro Ile Cys Phe Val Lys
      65                      70                      75                      80
Pro Thr Ser Ser Met Thr Ile Lys Thr Gly Lys His Val Asp Ala Asn

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85					90					95						
Gly	Lys	Ile	Tyr	Leu	Pro	Tyr	Leu	His	Asp	Trp	Lys	His	Pro	Arg	Ser	
100					105					110						
Glu	Leu	Leu	Glu	Leu	Ile	Gln	Ile	Met	Ile	Val	Ile	Phe	Gly	Glu	Glu	
115					120					125						
Pro	Pro	Val	Phe	Ser	Arg	Pro	Thr	Val	Ser	Ala	Ser	Tyr	Pro	Pro	Tyr	
130					135					140						
Thr	Ala	Thr	Gly	Pro	Pro	Asn	Thr	Ser	Tyr	Met	Pro	Gly	Met	Pro	Ser	
145					150					155					160	
Gly	Ile	Ser	Ala	Tyr	Pro	Ser	Gly	Tyr	Pro	Pro	Asn	Pro	Ser	Gly	Tyr	
165					170					175						
Pro	Gly	Cys	Pro	Tyr	Pro	Pro	Ala	Gly	Pro	Tyr	Pro	Ala	Thr	Thr	Ser	
180					185					190						
Ser	Gln	Tyr	Pro	Ser	Gln	Pro	Pro	Val	Thr	Thr	Val	Gly	Pro	Ser	Arg	
195					200					205						
Asp	Gly	Thr	Ile	Ser	Glu	Asp	Thr	Ile	Arg	Ala	Ser	Leu	Ile	Ser	Ala	
210					215					220						
Val	Ser	Asp	Lys	Leu	Arg	Trp	Arg	Met	Lys	Glu	Glu	Met	Asp	Gly	Ala	
225					230					235					240	
Gln	Ala	Glu	Leu	Asn	Ala	Leu	Lys	Arg	Thr	Glu	Glu	Asp	Leu	Lys	Lys	
245					250					255						
Gly	His	Gln	Lys	Leu	Glu	Glu	Met	Val	Thr	Arg	Leu	Asp	Gln	Glu	Val	
260					265					270						
Ala	Glu	Val	Asp	Lys	Asn	Ile	Glu	Leu	Leu	Lys	Lys	Lys	Asp	Glu	Glu	
275					280					285						
Leu	Ser	Ser	Ala	Leu	Glu	Lys	Met	Glu	Asn	Gln	Ser	Glu	Asn	Asn	Asp	
290					295					300						
Ile	Asp	Glu	Val	Ile	Ile	Pro	Thr	Ala	Pro	Leu	Tyr	Lys	Gln	Ile	Leu	
305					310					315					320	
Asn	Leu	Tyr	Ala	Glu	Glu	Asn	Ala	Ile	Glu	Asp	Thr	Ile	Phe	Tyr	Leu	
325					330					335						
Gly	Glu	Ala	Leu	Arg	Arg	Gly	Val	Ile	Asp	Leu	Asp	Val	Phe	Leu	Lys	
340					345					350						
His	Val	Arg	Leu	Leu	Ser	Arg	Lys	Gln	Phe	Gln	Leu	Arg	Ala	Leu	Met	
355					360					365						
Gln	Lys	Ala	Arg	Lys	Thr	Ala	Gly	Leu	Ser	Asp	Leu	Tyr				
370					375					380						

<210> 3

<211> 1494

<212> DNA

<213> Artificial Sequence

<220>

<223> TSG101 nucleotide

<400> 3

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atggtgtcca agtacaaata cagagacctt actgtacgtg aaactgtcaa tgttattact 180
ctatacaaag atctcaaacc tgttttgat tcatatgttt ttaacgatgg cagttccagg 240
gaactaatga acctcactgg aacaatccct gtgccttata gaggtaatat atacaatatt 300
ccaatatgcc tatggctact ggacacatac ccatataatc cccctatctg ttttgtaaag 360
cctactagtt caatgactat taaaacagga aagcatgttg atgcaaatgg gaagatatat 420
cttccttatt tacatgaatg gaaacacca cagtcagact tggtggggct tattcaggtc 480
atgattgtgg tatttggaaga tgaacctcca gtcttctctc gtccattttc ggcatcctat 540

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ccgccatacc aggcaacggg gccaccaaact acttcctaca tgccaggcat gccagggtgga 600
atctctccat acccatccgg ataccctccc aatcccagtg gttaccagg ctgtccttac 660
ccacctggtg gtccatatec tgccacaaca agttctcagt acccttctca gcctcctgtg 720
accactggtg gtcccagtag ggatggcaca atcagcggag acaccatccg agcctctctc 780
atctctgcgg tcagtgacaa actgagatgg cggatgaagg aggaaatgga tcgtgcccag 840
gcagagctca atgccttgaa acgaacagaa gaagacctga aaaagggtca ccagaaactg 900
gaagagatgg ttaccggttt agatcaagaa gttagccgagg ttgataaaaa catagaactt 960
ttgaaaaaga aggatgaaga actcagttct gctctggaaa aaatggaaaa tcagtctgaa 1020
aacaatgata tcgatgaagt tatcattccc acagctccct tatacaaaca gatcctgaat 1080
ctgtatgcag aagaaaacgc tattgaagac actatctttt acttgggaga agccttgaga 1140
aggggagctg tagacctgga tgtcttctctg aagcatgtac gtcttctgtc ccgtaaacag 1200
ttccagctga gggcactaat gcaaaaagca agaaagactg ccggtctcag tgacctctac 1260
tgacttctct gataccagct ggaggttgag ctcttcttaa agtattcttc tcttcctttt 1320
atcagtaggt gccagaata agttattgca gttatcatt caagtgtaaa atattttgaa 1380
tcaataatat attttctgtt ttcttttggg aaagactggc ttttattaat gcactttcta 1440
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<210> 4

<211> 390

<212> PRT

<213> Artificial Sequence

<220>

<223> Primer

<400> 4

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Tyr Arg Asp Leu Thr Val Arg Glu Thr Val Asn Val Ile Thr Leu Tyr
 20          25          30
Lys Asp Leu Lys Pro Val Leu Asp Ser Tyr Val Phe Asn Asp Gly Ser
 35          40          45
Ser Arg Glu Leu Met Asn Leu Thr Gly Thr Ile Pro Val Pro Tyr Arg
 50          55          60
Gly Asn Thr Tyr Asn Ile Pro Ile Cys Leu Trp Leu Leu Asp Thr Tyr
 65          70          75          80
Pro Tyr Asn Pro Pro Ile Cys Phe Val Lys Pro Thr Ser Ser Met Thr
 85          90          95
Ile Lys Thr Gly Lys His Val Asp Ala Asn Gly Lys Ile Tyr Leu Pro
100          105          110
Tyr Leu His Glu Trp Lys His Pro Gln Ser Asp Leu Leu Gly Leu Ile
115          120          125
Gln Val Met Ile Val Val Phe Gly Asp Glu Pro Pro Val Phe Ser Arg
130          135          140
Pro Ile Ser Ala Ser Tyr Pro Pro Tyr Gln Ala Thr Gly Pro Pro Asn
145          150          155          160
Thr Ser Tyr Met Pro Gly Met Pro Gly Gly Ile Ser Pro Tyr Pro Ser
165          170          175
Gly Tyr Pro Pro Asn Pro Ser Gly Tyr Pro Gly Cys Pro Tyr Pro Pro
180          185          190
Gly Gly Pro Tyr Pro Ala Thr Thr Ser Ser Gln Tyr Pro Ser Gln Pro
195          200          205
Pro Val Thr Thr Val Gly Pro Ser Arg Asp Gly Thr Ile Ser Glu Asp
210          215          220
Thr Ile Arg Ala Ser Leu Ile Ser Ala Val Ser Asp Lys Leu Arg Trp
225          230          235          240
Arg Met Lys Glu Glu Met Asp Arg Ala Gln Ala Glu Leu Asn Ala Leu

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<213> Artificial Sequence

<220>

<223> Primer

<400> 8  
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<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Primer

<400> 9  
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<210> 10  
<211> 28  
<212> DNA  
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<220>

<223> Primer

<400> 10  
atttagcagt cccaacattc agcacaaa 28

<210> 11  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Primer

<400> 11  
gagaccgacc tctccgtaaa gcattctt 28

<210> 12  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Primer

<400> 12  
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<210> 13  
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<220>	
<223> Primer	
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<212> DNA	
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cgggtgtcgg agagccagct caagaaa	27
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<212> DNA	
<213> Artificial Sequence	
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cctccagctg gtatcagaga agtcgt	26
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<400> 18  
cacagtcaga cttgttgggg cttattc

27

<210> 19  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Primer

<400> 19  
His Thr His Leu Ala Met Asx Asp Ala  
1 5

<210> 20  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Primer

<221> VARIANT  
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<223> Xaa = Any Amino Acid

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Phe Xaa Asn Gly Ala Leu Glx Cys Tyr Ser  
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<210> 21  
<211> 380  
<212> PRT  
<213> Homo sapien

<400> 21  
Met Val Ser Lys Tyr Lys Tyr Arg Asp Leu Thr Val Arg Glu Thr Val  
1 5 10 15  
Asn Val Ile Thr Leu Tyr Lys Asp Leu Lys Pro Val Leu Asp Ser Tyr  
20 25 30  
Val Phe Asn Asp Gly Ser Ser Arg Glu Leu Met Asn Leu Thr Gly Thr  
35 40 45  
Ile Pro Val Pro Tyr Arg Gly Asn Thr Tyr Asn Ile Pro Ile Cys Leu  
50 55 60  
Trp Leu Leu Asp Thr Tyr Pro Tyr Asn Pro Pro Ile Cys Phe Val Lys  
65 70 75 80  
Pro Thr Ser Ser Met Thr Ile Lys Thr Gly Lys His Val Asp Ala Asn  
85 90 95  
Gly Lys Ile Tyr Leu Pro Tyr Leu His Glu Trp Lys His Pro Gln Ser  
100 105 110  
Asp Leu Leu Gly Leu Ile Gln Val Met Ile Val Val Phe Gly Asp Glu  
115